Quick-Med Recommendation System in Medical Emergencies using Machine Learning

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Abstract: *In emergency medicine, timely and accurate drug recommendations are important to improve patient outcomes. This study presents a machine learning (ML)-based drug recommendation system designed for high-risk situations such as natural disasters, epidemics, and medical emergencies. The system uses various machine learning algorithms, including random forests, decision trees, and naive Bayes, to analyze patient demographics, medical history, vital signs, and existing medical records. Special engineering methods to extract relevant factors and create predictive models that can evaluate potential drug interactions, contraindications, and side effects. This model allows doctors to make rapid decisions in critical situations by monitoring the safety and quality of treatment. Preliminary tests show that the system achieves over 93% accuracy, demonstrating its reliability in generating recommendations. It can recommend drugs according to the patient's actual condition based on real-world knowledge and recommendations. This study demonstrates the revolutionary potential of machine learning in emergency medicine to reduce the burden on physicians while improving patient and safety during interventions. Finally, drug recommendations not only facilitate decision-making but also increase confidence in emergency medical care*

Keywords: Drug Recommendation, Machine Learning, Emergency Medicine, Patient Care, Predictive Modeling